

WHAT IS CLAIMED IS:

1. A method of disinfecting or sterilizing an article comprising the steps of:
 - 5 placing the article into a chamber;
 - reducing pressure in the chamber to a first pressure;
 - introducing a mist comprising a sterilant into the chamber;
 - 10 diffusing the mist through the chamber into contact with the article; and
 - wherein the first pressure is below atmospheric pressure and above the vapor pressure of the sterilant whereby to enhance diffusion of the mist throughout the
 - 15 chamber.
2. A method according to claim 1 wherein the sterilant comprises hydrogen peroxide.
- 20 3. A method according to claim 2 wherein the mist comprises a solution comprising hydrogen peroxide and water.
4. A method according to claim 1 wherein the first pressure is at least 5 torr below atmospheric pressure.
- 25 5. A method according to claim 4 wherein the first pressure is at least 15 torr below atmospheric pressure.
- 30 6. A method according to claim 4 wherein the first pressure is at least 30 torr below atmospheric pressure.

7. A method according to claim 1 further comprising sterilizing the article.

8. A method according to claim 7 sufficiently
5 efficacious to sterilize a stainless steel blade with at least 10^6 *Bacillus stearothermophilus* spores in less than 60 minutes.

9. A method according to claim 1 wherein the
10 chamber has an interior and the method further comprising sterilizing the interior of chamber.

10. A method according to claim 1 further comprising removing residual sterilant from the chamber.